

## CLAIMS

- 1) A porous material bonded to a substantially non-porous material comprising:
  - a) a substantially non-porous substrate having a bonding surface and a plurality of substrate apertures, having an aperture width and an aperture depth, and at least partially filled with adhesive in the bonding surface and,
  - b) a porous material bonded to the bonding surface.
- 2) The porous material bonded to a substantially non-porous material of claim 1 wherein there is a residue of adhesive on the bonding surface.
- 3) The porous material bonded to a substantially non-porous material of claim 1 wherein the aperture width is at least approximately 0.5 microns.
- 4) The porous material bonded to a substantially non-porous material of claim 1 wherein the aperture depth is at least approximately 0.5 microns.
- 5) The porous material bonded to a substantially non-porous material of claim 1 further comprising at least one substrate groove having a groove width and a groove depth on the bonding surface.
- 6) The porous material bonded to a substantially non-porous material of claim 5 wherein the at least one substrate groove extends between at least two substrate apertures.
- 7) The porous material bonded to a substantially non-porous material of claim 5 wherein the groove depth is at least approximately 0.5 microns.
- 8) The porous material bonded to a substantially non-porous material of claim 5 wherein the groove width is at least approximately 0.5 microns.
- 9) The porous material bonded to a substantially non-porous material of claim 1 wherein the substrate apertures comprise no more than approximately 50% of the bonding surface.

10) The porous material bonded to a substantially non-porous material of claim 1 wherein the substrate apertures extend substantially through the substrate.